Reading file

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

December 3, 2007

Kelly Finn
Caltrans, District 11 – Environmental Division
MS – 242
4050 Taylor Street
San Diego, CA 92110

Subject: EPA Comments on the State Route 76 Melrose to Mission Highway Improvement Project (CEQ# 20070426)

Dear Ms. Finn:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIS) for the State Route 76 Melrose to Mission Highway Improvement Project (SR76 Project). Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. We note that NEPA compliance for this project has been delegated from the Federal Highway Administration (FHWA) to California Department of Transportation (Caltrans) pursuant to the *Memorandum of Understanding Between the FHWA and Caltrans Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program (June 2007).*

EPA has coordinated with the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service to provide early regulatory agency input for this transportation project pursuant to the NEPA/Clean Water Act Section 404 Integration Process Memorandum of Understanding (NEPA/404 MOU). EPA appreciates the efforts of the FHWA and Caltrans in including EPA in DEIS development through this forum. We note that this coordination process has allowed for multiple, detailed discussions regarding specific alignment options, avoidance of sensitive resources, and potential for advanced mitigation for future transportation-related impacts.

While we are supportive of the extensive coordination between our agencies, following our review of the Draft EIS, EPA has rated the document as Environmental Concerns – Insufficient Information (EC-2). This rating is due to the need for an expanded cumulative impacts analysis and better understanding of how this project will be coordinated with the future, additional widening of portions of SR76 to the east. We recommend additional information for inclusion into the Final EIS regarding indirect and cumulative impacts to biological and aquatic resources and specific mitigation proposals.

The enclosure further describes the above-listed comcerns and the additional environmental concerns that EPA identified following our review of the Draft EIS. A "Summary of Rating Definitions" for further details on EPA's rating system is also provided. We appreciate the opportunity to review the Draft EIS and believe that continued coordination

through the NEPA/404 forum will ensure that environmental issues are addressed as early as possible.

We look forward to continuing our coordination with Caltrans as a cooperating agency and are available to discuss the issues addressed in this letter during upcoming interagency meetings. If you have any questions, please contact Connell Dunning (415-947-4161) or Elizabeth Goldmann (415-972-3398), lead reviewers for this project.

Sincerely,

Connell Dunning

For Nova Blazej, Manager
Environmental Review Office

Enclosures: EPA's Detailed Comments
Summary of Rating Definitions

Cc: Maiser Khaled, FHWA
Susan Wynn, Fish and Wildlife Service
Phoung Trinh, Army Corps of Engineers
L. Breck McAlexander, California Department of Fish and Game
Richard Chavez, SANDAG

EPA DETAILED COMMENTS ON THE STATE ROUTE 76 WIDENING – MELROSE TO MISSION, SAN DIEGO COUNTY, CALIFORNIA, DECEMBER 3, 2007

Range of Alternatives for Future SR-76 Improvements

At the initiation of the environmental review process for the widening of State Route 76, Caltrans decided to separate the environmental review process for widening SR 76 between Melrose Avenue and I-15 into two separate Environmental Impact Statements (EIS)s. The two separate EISs were defined as: (1) this project, referred to as SR 76 "Middle" , with proposed widening from Melrose to Mission, and (2) a separate (in-progress) EIS referred to as SR 76 "East", with proposed widening from Mission to I-15. Following this decision, during previous interagency meetings, EPA expressed concerns regarding the potential for decisions made during the SR-76 Melrose to Mission environmental review process to restrict the range of alternatives that could be analyzed for future SR-76 corridor projects east of the proposed improvements. Caltrans provided the following commitment during a September 19, 2005 interagency meeting to alleviate these concerns (text from background materials provided for meeting):

> *"It will be demonstrated that the selection and/or construction of an alignment for SR 76 between Melrose and Mission will not constrain the consideration of a full range of alternatives for improvement between Mission and I-15. The Draft EIS will present preliminary alternatives to the east, which will show that any of them could be considered regardless of the alternative decision between Melrose and Mission."*

The Draft EIS does not provide preliminary alternative to the east, nor does it demonstrate that alternatives could be considered regardless of the alternative alignment chosen between Melrose and Mission.

Recommendations:

- In the Final EIS, identify preliminary alternatives for future widening State Route 76 to the east.
- Demonstrate that any of the preliminary alternatives for the East widening can be considered regardless of the alignment chosen for Melrose to Mission.

Cumulative Impacts Analysis

In our November 20, 2005 letter to Caltrans and FHWA concurring on the Purpose and Need for this project, EPA highlighted concerns regarding the need for a thorough cumulative impact analysis. These concerns were raised following the decision to split the project into two separate EIS documents. Caltrans and FHWA committed to completing a thorough cumulative impacts assessment in the State Route 76 "Middle" EIS (this project), in order to articulate estimated impacts from the reasonably foreseeable future widening scenarios for SR 76 between Melrose and I-15. Despite this commitment, the cumulative impacts analysis includes no discussion of potential impacts to resources from the various scenarios being analyzed for the eastern widening.

Because it is reasonably foreseeable that 1) improvements on SR 76 will occur further east of the eastern terminus of the proposed project, and2) those improvements must directly link to this project, it is important that the cumulative impact analysis in this EIS specifically identify potential connection scenarios for the two projects as well as corresponding estimates of impacts to resources. Without even a general discussion of potential impacts that may result from the future widening of SR76 to the east, it is not possible to conclude what alternative is the environmentally and operationally preferred alternative from a larger, regional perspective. For example, what appears to be the environmentally and/or operationally preferable alternative for widening SR 76 from Melrose to Mission when only considering this 5-mile stretch of the project might not be preferable when assessing what additional impacts will result when widening scenarios requiring this alignment continue to the east. It is critical for decision-makers to have an understanding of the potential future impacts of this decision.

Recommendations:

- In the Final EIS, identify the potential impacts to resources from preliminary alignment alternatives for future SR 76 widening to the east.
- Identify if these potential impacts may contribute to significant impacts to resources.
- Commit to specific avoidance, minimization, and mitigation measures for the future SR 76 widening to the east.

In the Cumulative Impacts Assessment, Caltrans identified separate resource study areas (RSA) for analysis of potential cumulative impacts. EPA commends Caltrans for using this approach because the potential area to be cumulatively impacted varies among resources. For example, Figure 3.28-1 identifies a large, watershed-based RSA for "Hydrology and Floodplain impacts" and a smaller "wetlands and other waters" RSA. In particular, Figure 3.28-1 is an excellent visual aid to support the cumulative impacts analysis.

It is not clear, however, why the area for the Hydrology and Floodplain RSA and the Wetlands and other Waters RSA stops at the western terminus of the project and does not continue further west throughout the entirety of the watershed and San Luis Rey River. The contribution of this project's impacts to hydrology, floodplain management, and the San Luis Rey River will likely have downstream effects, so it is important to analyze this projects contribution to downstream effects when considered with other reasonably foreseeable projects. In addition, other reasonably foreseeable future projects that are also impacting the "downstream" portions of the San Luis Rey River and watershed should be added to the list of projects considered in the cumulative impacts analysis.

Recommendations:

- Expand the size of the Hydrology and Floodplain RSA and the Wetlands and Other Waters RSA to include downstream stretches of the San Luis Rey River and Watershed.
- Following the need to revise the RSA for Hydrology and Floodplain and Wetlands and other waters, identify if there are additional actions in the project vicinity that may contribute impacts to these resources. For example, the San Luis

Rey Flood Control Project is not identified on Table 3-28-1; however, this is an action that will contribute cumulative impacts to hydrology and the river.

- Update the conclusions of the cumulative impact assessment, and proposed mitigation, to reflect the new information provided.

Water Quality

Widening the amount of impervious surfaces in the area will increase storm water runoff, which could be a major source of degradation to the San Luis Rey River. Page 3-108 identifies that the project will increase surface area by widening the existing road from a 2-lane to a 4-lane facility. However, the actual paving for this project will accommodate a future 6-lane facility, and therefore will result in more additional impervious pavement than a 4-lane facility would impact. It is not possible to confirm whether the analysis of stormwater impacts considered a 6-lane facility or not because the analysis is incorporated by reference into this document, rather than included as an appendix or an attachment.

The Draft EIS does not provide quantification of the increased impervious area and states that "where an increase in paved surfacing leads to an increase in total or peak runoff discharges, a thorough evaluation is performed to determine if any adverse impacts would result (p. 3-111)." The Draft EIS then states that Caltrans will consider the following:

> *"-Modifications to channel (both natural and man-made) lining materials, including vegetation, geotextile mats, rock, and rip-rap;*
> *- Energy dissipation devices at culvert outlets;*
> *- Smoothing the transition between culvert outlets/headwalls/wing walls and - channels to reduce turbulence and scour;*
> *- Incorporating retention or detention facilities to reduce peak discharges; and*
> *- Preventing hazardous spills from entering streams and lakes."*

In addition to the increased impervious surfaces from the widening and operation of the highway system, runoff associated with construction activities has the potential to contribute to further water quality impairment. Storm water runoff from construction sites is a major concern and may facilitate the discharge of pollutants such as sediment, fertilizers, pesticides, oil and grease, and other construction chemicals and debris. Construction sites can deposit more sediment into rivers and estuaries than can be deposited naturally over several decades.

Recommendation:
Because this specific highway widening project is adjacent to the San Luis River, an already impaired waterbody, the water quality analysis in the EIS should include an estimate of increase impervious surfaces, estimates of increases in stormwater runoff locations and volume, and locations for specific design features to minimize discharges and dissipate energy, rather than listing measures that will be considered once impacts are known. The Draft EIS should include the following:

- Provide more information in the FEIS to support the conclusion that the project will not cause or contribute to further impairment of downstream waterbodies. In

addition, either provide a copy of the technical report that is incorporated by reference, or provide access to the information on a website or via CD so that the public can review this information.

- Clarify that the stormwater run-off analysis considered the additional impervious surface of a future 6-lane facility rather than a 4-lane facility as stated on page 3-108. Revise the analysis if needed and provide a quantification of the actual, existing impervious surface, along with an estimate of the additional estimated impervious surface that would result from both alternatives.
- Identify specific locations, on a map, where runoff is expected, along with a map indicating where specific design features for stormwater management will be placed (bioswales, etc.). These options should be presented as a part of the EIS process, not deferred until a later stage, as stated on p. 3-111.
- Include a summary of the analysis performed to substantiate the determination that, with BMPs, the project will not substantially affect water quality on a short- and long-term basis.
- Include storm water performance standards for both construction site sediment control and post-construction project design standards in the FEIS and ROD.
- Provide more information regarding the placement, selection, and performance of the BMPs mentioned in Section 3.14.4 (Avoidance, Minimization and Mitigation Measures) in the FEIS.
- Design, install, and maintain BMPs to control total suspended solids (TSS) carried in runoff post-construction of the project.
- Employ BMPs to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to the pre-development conditions.

Biological and Water Resources

Aquatic Resources – Interagency Coordination

EPA understands that a revised jurisdictional delineation is being provided to the Army Corps of Engineers for approval. Comments provided in this letter reflect the information provided in the Draft EIS. Should additional information become available regarding a change to the jurisdictional delineation presented in the DEIS, EPA may provide additional comments at that time. Please forward updated/revised information regarding impacts to aquatic resources to EPA when completed. This is particularly important given the purpose of the NEPA/404 MOU forum – to streamline future CWA Section 404 permitting and NEPA.

Recommendation:

- Please send EPA an update regarding change to impacts to waters of the United States once a jurisdictional delineation is completed.
- We recommend that all regulatory agencies be convened to discuss the preliminary "least environmentally damaging practicable alternative" and conceptual mitigation plan prior to release of the Final EIS.

Aquatic Resources – Indirect Impacts

Table 3.21-2 identifies permanent and temporary impacts to Aquatic Resources, (federal

and state). However, this table does not identify indirect impacts to these resources. It is unclear whether Caltrans has evaluated or quantified indirect impacts. These impacts include: (1) increases in impervious surfaces and the corresponding increases in the volume and velocity of polluted stormwater; (2) vegetative changes and disturbance to wetlands habitat which results in a reduction in the functional capacity of adjacent wetlands; (3) fragmentation of large, undeveloped, high functioning wetlands ecosystems; (4) the creation of noise, glare, and other similar human-related disturbances to aquatic resources; (5) shading of wetland habitat from roads and bridges; and (6) decreases in biodiversity and ecosystem stability.

Recommendation:

- Conduct a functional assessment, such as HGM, to detect the changes in ecosystem functions as a result of the proposed project.
- Clarify if the estimate of 3.15 acres of impacts to jurisdictional waters includes indirect impacts.
- Update Table 3.21-2 to identify what the estimated indirect impacts to jurisdictional waters will be.
- Provide a description of the proposed mitigation to offset indirect impacts if the current description refers only to mitigation for direct impacts.

Biological and Water Resources – Mitigation

EPA is aware of Caltrans efforts to identify potential mitigation parcels along the proposed transportation route. We commend Caltrans for the extensive efforts to identify parcels within the project vicinity. While the Draft EIS does describe multiple mitigation parcels, it does not specify what specific ratios will used for replacement-to-loss mitigation of impacts to biological and aquatic resources and it does not provide estimates of the specific number of acres within each parcel that are linked to the impacts that will result from this project. We understand that until specific parcels are purchased, the exact mitigation plan cannot be identified. However, it is appropriate to identify specific ratios and number of acres of mitigation that will be pursued. This will be necessary for future discussions related to the conceptual mitigation plan.

Recommendation:

- In the Final EIS identify the exact ratio of replacement-to-loss mitigation that is proposed for the proposed project. While the specific mitigation parcel may not yet be identified upon publishing the Final EIS, it is appropriate to commit to specific ratios of replacement-to-loss.
- We encourage you to work with appropriate regulatory agencies prior to publishing the Final EIS to identify the exact ratios, as well as the exact number of acres, and locations, that will be required for mitigation impacts. Revise the portions of the document that identify a range of potential ratios to identify more specifically what the ratios will be.

Wildlife Crossings

EPA commends Caltrans for committing to incorporation of wildlife movement passages throughout the project. However, p.3-21 identified that some wildlife crossings may be designed to also allow for pedestrian and/or equestrian passage. Wildlife crossings must be designed

around specific species needs regarding light, substrate, height, width, and location. These should be foremost in planning wildlife crossings. Separate passage locations should be identified for equestrians, pedestrians, and bicycles given the potential user conflicts between human and species needs.

Recommendation:

- First, work with local species experts to identify what specific wildlife species movement will be impacted by the highway widening and new centerline barrier. Provide a list of those species in the Final EIS.
- Work with local species experts to identify the most effective locations along the project area for wildlife crossings. Provide a map indicating proposed wildlife crossing locations.
- Include the crossings design features that are specific to each species and are proposed for effective wildlife movement.
- Coordinate with local trail user groups to identify the most appropriate locations for human, horse, pet, and bike crossings. Ensure that separate pedestrian/equestrian/bicycle crossing locations will be placed to 1) optimize movement of people (near informal or planned trail networks that are being impacted, near destinations, etc.), and 2) minimize conflicts with species needs. Specifically, "wildlife only" crossings should be created in addition to trail-user crossings for human, horse, bike, and pet crossings.

Air Quality Impacts

Air Toxics-Dispersion Modeling

Page 1-130 states that the Air Quality Analysis (Section 3.18) is based on the June 2007 Air Quality Analysis, a separate technical study prepare for the project and "incorporated by reference". Following our review of Section 3.18, we requested the 2007 Technical Report and provide our comments based on that document.

Recommendation:

EPA recommends that the complete Air Quality Analysis be included in the Final EIS as an Appendix, not included by reference, so that the supporting data accompanies the FEIS conclusions.

The discussion related to Mobile Source Air Toxics Analysis (p. 37, 2007 Technical Report) states that existing limitations in dispersion models makes it "difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk." While the CALINE and CAL3QHC were developed and validated a number of years ago, as stated in the DEIS, they continue to undergo validation. A number of recent studies have determined that CALINE, especially CALINE4, accurately predicts ambient concentrations in near-roadway environments for both gaseous and particulate pollutants (see, for example, Gramatnev et al., Atmospheric Environment, volume 37, pages 465-474, 2003; Zhang et al., Atmospheric Environment, volume 39, pages 4155-4166, 2005). The joint University of California Davis - Caltrans report, entitled "*A Survey of Air Quality Dispersion*

Models for Project-Level Conformity Analysis" (June 19, 2006), concluded that available models are appropriate for modeling project-level dispersion of on-road and construction emissions.

In the near-roadway environment, the major MSATs will behave similarly to carbon monoxide: both are treated as inert gases for the purposes of dispersion. In fact, one of the most reactive MSATs, formaldehyde, has an atmospheric half-life very similar to carbon monoxide: 4-10 hours for formaldehyde compared to 4-6 hours for carbon monoxide under typical conditions. Since the majority of impacts are expected to occur within 1000 feet of the roadway or closer (for a summary of supporting studies, see Section 3.1.3 of EPA's "Draft Regulatory Impact Analysis: Control of Hazardous Air Pollutants from Mobile Sources," February 2006, http://www.epa.gov/oms/regs/toxics/ria-sections.htm), pollutants are dispersed within a few minutes under average wind speeds. Neither MSATs nor carbon monoxide undergo significant reactions in a few minutes, and thus both can be accurately treated as inert gases for the purposes of dispersion, as is standard practice for carbon monoxide. Based on these recent studies and reports, CALINE4 would be an appropriate tool for dispersion analysis of MSATs within the DEIS, if desired. The March 2007 report, entitled "*Analyzing, Documenting, and Communicating the Impacts of Mobile Source Air Toxic Emissions in the NEPA Process*" (http://www.trb.org/NotesDocs/25-25(18)_FR.pdf), prepared for the American Association of State Highway and Transportation Officials (AASHTO), identifies CALINE4 as the "Best Available Air Quality Modeling Tool for use in Analyzing MSATs under NEPA" for purposes of both roadway widening and high occupancy vehicle (HOV) lane addition.

Recommendation:
EPA recommends the following updates regarding information provided in the Air Toxics section:

- Update the language on "Information that is Unavailable or Incomplete," beginning on page 194, as noted above.
- Revise the discussion of uncertainties in "Dispersion" to include an updated discussion of the use of CALINE4 in situations similar to the proposed project, referencing more recent studies and the report prepared for AASHTO.
- Revise the discussion to more accurately reflect dispersion of MSATs and carbon monoxide. Specifically, the FEIS should remove implications that dispersion of MSATs would differ from dispersion of carbon monoxide.
- If dispersion modeling is pursued in the Final EIS, we are available to assist FHWA and Caltrans in developing meaningful model inputs and interpreting the results.

Air Toxics-Health Effects

Page 36 (2007 Technical Report) states that "available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with implementation of the proposed project". Page 37 of the same document states that "shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts." However, both EPA and California Office of Environmental Health Hazard Assessment (OEHHA) have long standing experience and published, peer-reviewed guidance for evaluating long-term health effects, including cancer risk. The concerns raised about estimating exposure over a 70-year lifetime

have been addressed extensively by our agencies. Recently, EPA has published an Air Toxics Risk Assessment Reference Library (http://www.epa.gov/ttn/fera/risk_atra_main.html) that addresses the precise shortcomings raised in the MSAT analysis for this project – namely how to develop appropriate exposure scenarios in a risk assessment. Similarly, California OEHHA has hot spot risk assessment guidance published in support of California's Air Toxics "Hot Spots" Informationand Assessment Act of 1987 (a.k.a. AB2588, http://www.oehha.ca.gov/air/hot_spots/pdf/HRAguidefinal.pdf). While we agree with the statement in the DEIS that there are always uncertainties associated with such an analysis, for this project most uncertainties would be consistent across alternatives, and thus such an analysis would still be sufficient for distinguishing between the impacts among scenarios and informing mitigation.

Recommendation:

Revise the discussion of uncertainties in "Exposure Levels and Health Effects" to include a discussion of possible exposure scenarios typically used by EPA and California OEHHA in air toxics risk assessments. EPA is not recommending that FHWA and Caltrans perform a human health risk assessment. We do, however, acknowledge that such an assessment is possible. If a human health risk assessment is pursued in the Final EIS, we are available to assist FHWA and Caltrans in developing meaningful exposure scenarios.

Page 38 (June 2007 Technical Report) provides toxicity information for the six MSATs of most concern. We support the need to provide this information in the MSAT analysis for the DEIS, but note that the following corrections for incorporation into the FEIS. Specifically, there are multiple non-cancer health outcomes that should be disclosed in the FEIS.

Recommendation:

The summary of toxicological endpoints included in the MSAT Section of the June 2007 Technical Report (p. 38 and 39)should also include health endpoints other than cancer for acrolein, benzene, acetaldehyde, formaldehyde, and 1,3-butadiene. Update the MSAT discussion in the FEIS to include the information in the Memorandum and the following additional information:

- The primary health concern for acrolein is not cancer, but rather a respiratory endpoint (nasal legions, http://www.epa.gov/iris/subst/0364.htm#refinhal). Remove references to potential carcinogenicity for acrolein.
- Similarly, benzene (decreased lymphocyte count, http://www.epa.gov/iris/subst/0276.htm#refinhal), acetaldehyde (degeneration of the olfactory epithelium, http://www.epa.gov/iris/subst/0290.htm#refinhal), formaldehyde (respiratory, http://www.atsdr.cdc.gov/toxprofiles/tp111-c2.pdf), and 1,3-butadiene (ovarian atrophy, http://www.epa.gov/IRIS/subst/0139.htm#refinhal) all have non-cancer health endpoints of potential concern

National Ambient Air Quality Standards

Page 3-131 of the DEIS identifies ambient air quality for the Escondido monitoring station. However, EPA notes that the Alpine monitoring is a better representation of the area as a

nonattainment and may better register the impact of the project on increases of ozone precursors. In addition, EPA recommends that the Air Quality Analysis be updated to reflect that the area is a maintenance area for the 1-hour NAAQS for ozone.

Recommendations:

Include the Alpine Monitoring Station in the discussion of existing air quality and provide monitoring data from this station for all criteria pollutants.

Update the Air Quality analysis to reflect that the project area is a maintenance area for the NAAQS for 1-hour ozone.

Greenhouse Gas Emissions

The State of California has increased its focus on potential climate change and impacts of increasing greenhouse gas emissions. Specifically, AB32 and Executive Order S-3-05 recognize the impact that climate change can have within California and provide direction for future reductions of greenhouse gases. In addition, NEPA requires the disclosure of impacts to resources. However, the DEIS does not disclose project-related greenhouse gas emissions and does not analyze the potential impacts of climate change on the project.

Recommendation:

Identify the project's direct effects on greenhouse gas emissions and discuss the potential impacts of climate change on the proposed project. Identify if there are specific mitigation measures needed to 1) protect the project from the effects of climate change, 2) reduce the project's adverse air quality effects, and/or 3) promote pollution prevention or environmental stewardship. The FEIS should analyze the impacts of the project in relation to compliance with AB32 and California Executive Order S-3-05.

Construction Mitigation Measures

The DEIS includes requirements to reduce emissions. In addition to these measures, EPA recommends the following additional measures to reduce the impacts resulting from future construction associated with this project.

Recommendations:

We recommend that the following additional and/or revised measures be incorporated into a Construction Mitigation Plan.

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.

- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at EPA certification levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- Prohibit any tampering with engines and require continuing adherence to manufacturers recommendations
- Require that leased equipment be 1996 model or newer unless cost exceeds 110 percent or average lease cost. Require 75 percent or more of total horsepower of owned equipment to be used be 1996 or newer models. If practicable, lease newer and cleaner equipment meeting the most stringent of applicable Federal or State Standards (see table: http://arb.ca.gov/msprog/ordiesel/documents/Off-Road%20Diesel%20Stds.xls). In general, only Tier 2 or newer engines should be employed in the construction phase, given the scale of the construction project and the high background levels of pollutants in the area.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site.

Administrative controls:

- Identify all commitments to reduce construction emissions and update the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.)
- Utilize cleanest available fuel engines in construction equipment and identify opportunities for electrification. Use low sulfur fuel (diesel with 15 parts per million or less) in engines where alternative fuels such as biodiesel and natural gas are not possible.

- Develop a construction traffic and parking management plan that minimizes traffic interference and maintain traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors away from fresh air intakes to buildings and air conditioners.

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."